Morgan Nesbit Forest Resiliency Project

Summer, 2020

Background

The Morgan Nesbit Resiliency Project is located 20 miles southeast of Joseph, Oregon, on the Wallowa Whitman National Forest. The planning area is approximately 87,000 acres. The landscape is transitional between the Wallowa Mountains and the canyonlands of the Imnaha River. Administratively, a little over 48,000 acres (55%) are within the Wallowa Valley Ranger District, and 38,000 acres (45%) are within the Hells Canyon National Recreation Area.

Across the Blue Mountains of Oregon and southeast Washington, the composition, structure, and density of forested stands have dramatically departed from historic reference conditions (mid-1800s). Fire suppression, timber harvest, and grazing since settlement by Euro-Americans have altered forest structure, composition, and disturbance regimes in much of the Inland Northwest, including in this project area (Hessberg et al. 2005, Hessberg et al. 2016, Johnston et al. 2018).

In 2015 Volger, et al. looked at National Forest lands in eastern Oregon and prioritized locations based on several factors, including vegetation departure from reference conditions and the risk of uncharacteristic disturbance from wildfire and insects. At that time, the Morgan-Nesbit area was the seventh-highest at risk planning area in need of restoration on the Wallowa-Whitman National Forest.

Historically fire was the greatest disturbance agent and regulator of these forested systems. Frequent low intensity and low severity fires were a moderator of risk by periodically reducing accumulated surface fuels and small diameter seedlings and saplings that have the potential of transmitting surface fires into the forest canopy. These fires also enhanced stand resiliency to insect and disease disturbance events by maintaining open stands of primarily fire and drought resistant trees at levels that allowed increased site resources (water and nutrients utilized for growth and defense) to be available for the surviving trees.

Existing Condition

The current forest structure and composition, tree density, high fuel loads, and departed riparian conditions make this area at high risk of loss and less resilient to severe impacts from wildfire, insects, and disease.

Desired Condition

The desired condition for the project area is to move it toward an ecologically resilient landscape, which has the biological capacity to adapt and thrive under adverse environmental conditions, such as climate change or natural disturbances, including wildfire or high streamflow events. To reduce the risks of loss and impacts, the Forest Service will move forest, riparian, and grassland conditions toward an ecologically resilient landscape by:

- Reducing stand densities to improve vigor and increase resilience to insects, disease, drought, and wildfire

- Maintaining and promoting fire and drought tolerant species
- Protecting and promoting the development of late, old structure
- Reducing fuel loads and reintroducing fire on the landscape
- Restoring ecological function of riparian areas

Potential Treatments

Silvicultural

A variety of silvicultural treatments would be designed to move the landscape toward the desired condition. The variation will be guided by Management Areas identified in the Forest Plan, the Potential Vegetation Groups, and the existing and desired conditions.

- In *upland forest stands*, treatments would include variable density thinning, group openings, regeneration harvest, non-commercial thinning, and prescribed fire. These treatments may include the removal of select trees greater than 21" DBH to meet stand and retained tree objectives.
- In *riparian forest stands*, treatments would primarily be variable density thinning.

Fuel Reduction

Fuel reduction would include removal of downed wood, biomass, and ladder fuels, both mechanically and by hand, and through the use of prescribed fire. Strategic fuel breaks will be designed along ridgetop roads, and main roads. Removal of slash and biomass will be proposed for commercial and non-commercial thinning units.

Prescribed fire may occur in areas where thinning is also proposed to reduce accumulations of natural fuels and debris created by proposed treatments. Maintenance underburning in future years would be implemented, as needed, after the initial prescribed fire treatments have been completed to help maintain appropriate fuel loadings.